Water Works and Sewerage Index

Vol. 91. January-December, 1944

8951
6

A

Accounted-For Water and Unbilled Revenue 278
Accounting Practices, Municipal Depreciation 270
Accounts, Joint Administration and Collection of Water and Sewer..... R161
Activated Sludge
  Air Distribution System Design..... R205
  Cleaning Plates R222
  Density to Volume Ratio R252
  Experience in Operation R211
  Gary, Ind. 143
  Purging Plates with Chlorine R221
  Sludge Index Test 222
Activated Sludge Plant Recommended for "Home of the Angels"..... 333
Activated Sludge Plant Operation at Gary, Ind. 143
Addis Ababa 366
Administration and Collection of Joint Water and Sewer Accounts..... R161
Air Diffuser Plate Purging with Chlorine R221
Air-Diffusion Media, Economics of Cleaning R222
Air Distribution Systems for Activated Sludge Plants R205
Air Flushing of Small Mains..... R110
Air-Lift Subaqueous Trencher 259
Aldrich Returns to Water Utility Operating and Engineering Field..... 339
Aldrich to Continue Practice..... 130
Algae Control R127
Alternate and Substitute Pipe Materials. 216
"All 'Cause of This Here Filterin' They Do" 326
Amen Brother! An Editorial 438
Ammonia Cylinders Short Too!..... 68
And Then, A Chemist Was Hired..... 33
Application of the Sludge Index Test to Plant Operation 222
Applied Hydraulics Handbook—Review.. 36
Aquatic Vegetation and Micro-organisms, Control of R127
Areas of Circles, Squares, Square Roots. R264
A.S.C.E. Sanitary Division & N.Y.S.S.W.A. 63
A Sound Sewerage Financing Scheme—(Editorial) 116
Aurora Gas Engines Continue to Earn Money 426
A.W.W.A.
  Board Actions 49
  Five Hundred % Inc. in Ark..... 162
  In Milwaukee 241
  Milwaukee Conference a Sellout 152
  Milwaukee Program 176
  Papers Before F. & A. Division 287
  Purification Division 281
  Sessions in Milwaukee 285
  Symposium on Ground Water Supplies 290
  Symposium on Joint Water & Sewage Management 287
  Symposium on Water Works Management 285

B

Back Washing Nozzle..... 184
Bacteriological Examination of Water... 109, 321
Bag of Shot for Uneven Pressing..... 221
Bailey, "Bill," Takes His Life..... 273
Bearing Bronze, Self Lubricating Oilite (Beemer) ..... Dec. 80
Becker, Charlie, Passes ..... Dec. 80
Beckett Heads State Sanitary Engineers 382
Believe It or Not! Water "Super" Has a Church All His Own..... 14
Bending Pipes R111
Benefits from Modern Sewerage Systems. 303
Blueprinting for Beautification — An Editorial 334
Blueprint Now in Action!..... 405
Blueprint Now! Straws in the wind of 411
Board Actions, A.W.W.A..... 49
Book Reviews
  Handbook of Applied Hydraulics..... 36
  Manual for Water Works Operation.. 108
  Water Works Engineering in Disaster 188
British Govt. Contemplating National Sewage Systems 189
Brown, Reuben, Los Angeles Supt. Sewer Maintenance 11
Bugbee, Julius, Retires..... 48
Build Your Own (Gadgets)..76, 151, 225, 231, 400
Build Your Own Lime Solution Controller 400
Burning Water 170

C

Camp, "Tom," Acquires Consulting Practice of Late Sam Ellsworth..... 368
Canadian Inst. of Sewage and Sanitation 426
Canadian Section's Meeting Largest in History 197
Canadian Sewage Institute Held Annual Meeting In Niagara Falls, Ont..... 31
Camp, Prof., Opens Consulting Office..... 179
Capacity, Maintenance of Water Well... R112
Cartoons 102, 108
Cast Iron Pipe Cutting..... R75
Caulking of Pipe Joints, Pneumatic..... R109
Cement Lining Old Mains in Place Pays. 238
Central Control at Milwaukee Sewage Plant 99
Centrifugal Pumps (see Pumps)..... R59
Centrifugal Pump Conservation..... R63
Change Gear, Gauge for Meter..... R114
Charges for Industrial Waste, Special Sewer Service 113, R166
Charts for Determining Equivalent Pipes and Loop Flow Distribution..... 313
Chemistry Made Easy..... 221
Chlorination
  Effluent 300
  Control in Sewage Dosage R244
  Cleaning Filters 209
Chlorine (see also, Chlorination)
  Demand, What is 72
  For Cleaning Filters 209
  Purging of Air Diffuser Plates R221
  Supply Short Again 280
Chlorine Dioxide — A Development in Water Treatment 423
Checking Pump Efficiencies..... R59
Classified Index of Products..... R3
Circle Areas, Table of..... R264
Circular Orifice at End of Pipe, Flow Measurement With R103
Cleaning Air Diffusion Media..... R222
Cleaning Filters
  With Chlorine 209
  With Sulphur Dioxide R157
Cleaning Water Mains, Economy of..... 72
Coagulation Aid by Colloidal Silica..... 211
Collection of Water and Sewer Accounts, Joint Administration of..... R161
Colloidal Silica as an Aid to Floc Formation 211
Combined Management of Water Works and Sewage 153
Complaining Consumer, What to Tell.... 96
Compressed Air Flushing of Small Mains. R110
Compressed Air Speeds Pipe Cutting..... 56, R111
Concrete Pipe, Flow Through (Chart) R262, R263
Concrete, Proportioning R160
Condition of Mains, Determining..... R101
Conical Piles, Contents of..... R250
Conservation of Centrifugal Pumps..... R63
Control of Micro-Organisms and Aquatic Vegetation R127
Control of Sewage Chlorination..... R244
Control of Solution Feed..... 221
Control of Velocity in Grit Channels..... R169
Conventions and Meetings:
  A.S.C.E.—San. Div. (Jan. Meet)..... 63
  A.W.W.A. Board Actions..... 49
  A.W.W.A. Annual Meeting in Milwaukee.....241, 281, 285, 287, 290
  Canadian Section Meeting (April., 44) 197
  Canadian Sewage Inst. Annual Meeting 1943 31
  Fed. Sew. Wks. Assn. 16th Meeting, Part II—431, Part I..... 377
  Illinois Section Peoria Meeting..... 171
  Indiana Section 37th Meeting..... 163
  Maine Utilities 15th Annual Meeting 93
  Maine Water Util. Assn..... 317
  Michigan Sew. Wks. Assn. 20th Conference 180
  Missouri Conference, Oct., '43..... 57
  N. Dak. Water & Sew. Wks. 16th Conference 302
  N. E. Sew. Wks. Assn. Fall Meeting 353
  N.E.W.W.A. March Meeting..... 129
  N. Hamp. Water Works Assn. Fall Meeting 398
  N. J. Sect. Nov., 1943, Meeting..... 23
  N. J. Sewage Works Assoc. 29th Annual Meeting 135
  New Jersey Section's Winter Meeting 105
  N. Y. Section Spring Election..... 179
  N. Y. Sew. Wks. Assn. Jan. Meeting 63
  N.Y.S.S.W.A. Spring Meeting..... 301
  Ohio Sect. 6th Conference (Columbus) 261
  Penna. Water Operators Meet. at Columbia 401
  Sixty-third Annual Meeting N.E.W.W.A., Part I..... 341
  Part II 388
  Southeast Sect. Meeting in Greenville 253
  Southwest Section 413
  Texas Twenty-sixth Water and Sewerage Works Short School..... 103
  Water & Sew. Div. A.C.S..... 365
  West Virginia Conference (Nov., '43) 85
  Wis. Sect. A.W.W.A., Oct., 1943.... 15
Conversion Table, Metric..... R26
Copper and Health..... R138
Copper Sulphate for Killing Roots in Sewers R246
Correction of Water Waste Leakage..... R105
Correctives for Water Hammer.....R66, R69
Corrosion
  Digester Heating Coil 185
  Effect on Copper and Health..... R138
  Mechanism, of Pipes R133
Cost of Sludge Removal, Reducing..... R247
Court Holds Operation of Sewage Plant a Corporate Rather Than Governmental Function 206
Cross Connections Valve Arrangement.... 127
Cutting Cast Iron Pipes.....R75 R111

D

Dear Bill Letter 90
Deaths:
  Bailey, Wm. T..... 273
  Becker, Charles ..... Dec. 80
  Ellsworth, Sam M..... 318
  Gidley, H. T..... 150
  Hansen, Paul 52
  Rupp, Dan 382
  Symons, Martin M..... 76
Decimal Equivalents R252
Density to Volume Ratio in Sludge..... R252
Denver Water Board Plans Construction. 327
Depend on Your "Friends at Court" in Washington—An Editorial 334
Depreciation Accounting Practices, Municipal 270
Depreciation, Dollars and Sense of..... 278
Design of Air Distribution Systems for Activated Sludge Plants..... R205
Design of Sewers, Practices of..... 227
Detection of Waste Water in Sewer Flows R172
Determination of
  Condition of Mains R101
  Sand in Well Water R149
  Settleable Solids in Sewage 37
  Yardage on Reels and Drums R26
Developments of the Year in Water Supply 1
Development of Rock Wells..... 319
Developments of the Year in Sewerage and Industrial Wastes 39
Development in Water Treatment — Chlorine Dioxide 423
Difficulties and Limitations in the Bacteriological Examination of Water... 109
Diffused Air Activated Sludge Plant Operation R211
Diffuser Plate:
  Cleaning R222
  Purging with Chlorine R221
Digester Heating Coil, Corrosion of..... 185
Direct Reading Gage for Fire Hydrant Flow 412
Discharge by Sprinkler Heads..... R96
Distribution—Depreciation 91
Distribution System, The R79
Distribution System:
  Air for Activated Sludge R205
  Compressed Air Flushing R110
  Determining Condition of R101
  Elevated Storage R91
Dodge, F. W., To Use Blueprint Now Slogan 308
Dollars and Sense of Depreciation..... 274
Don't Be a Scrambler—Editorial..... 406
Dosage Control in Sewage Chlorination... R244
Dry Weather Coming 98

E

Economics of Cleaning Air Diffusions Media R222
Economy of Cleaning Water Mains..... 72
Editorials.38, 80, 116, 190, 232, 302, 334, 406, 438
Efficiencies, Checking Centrifugal Pump.. R59
Effluent Chlorination at Cleveland..... 300
Effluents and Streams, Oxidants and Reductants in 219

Elected President of Publishers' Association 258
Electrical Calculator, A Time Saver..... R43
Electrical Data and Horsepower R43
Electric Heat Solves Problem at Pumping Station R120
Electricity in the Plant, Practical..... R37
Elevated Storage R91
Eliminating Surge Troubles on Pump Discharge Lines R66
Ellsworth, Sam, Passes..... 318
Employee Organization in the Professional Field and the Public Services..... 233
Engineer Collective Bargaining—An Editorial 80
Engines, Principles of Power Generation with Sewage Gas..... R227
Equation of Pipes R261

Equipment News:

Aerifier (Yoemans Bros.) July..... 73
Aero-Titrator (Chief Chem.) Oct..... 96
Automatic Pipettes (Macalaster, Bicknell Co.) Apr. 80
Automatic Water Sampler (Economy Mfg.) Sept. 89
"Bestolife" Joint Compound (Grancell) May 79
Calculator, Universal (Grinnell) Aug..... 83
Chaser Grinding Fixture (Oster Mfg.) Feb. 86
Chlorine Barge (Pitts. Plate Glass) Nov... 75
Chlorine Dioxide Bleach (Mathieson) Jun. 124
"Circuline" Sludge Collector (Link-Belt) Jun. 120
Colorimeter, Lumetron (Photo Volt Corp.) Nov. 81
Curved Entrance Sluice Gate (Rod. Hunt) Apr. 74
Diaphragm Valve (McAlear) Oct. 93
Diesel Engine, "Viking" (Sterling) Oct. .. 95
Electric Tachometer (Ideal Commutator Dresser) Jan. 75
Electronic Bin Level Indicator (Mosher Elect. Cont. Systems) Apr. 81
Etcher and Demagnetizer (Ideal Commutator Dresser) Apr. 74
Floor Brick, "Emri" Tread (Empire Emery) Nov. 80
Folding Ladder (Duo-Safety Ladder)..... 84
Gas Analyzer Recorder, Continuous (Cambridge Inst. Co.) Aug. 84
"Handi-Lift" Chain Hoist (P&H) Jun. .. 125
Heat Resistant Paint (McDougal-Butler) May 81
Hole Cutters, Adjustable (Bruno) Oct. ... 98
Hook Light Sand Expansion Gage (Builders-Providence) Jun. 119
Hose Clamps (Aero-Seal) Aug. 83
Hypochlorite Container (Hood) Nov. 77
Improved Rate Indicator for Meter Testing (Neptune) Mar. 76
Induction Motors (Elect.-Mach.) Oct. 96
Iron Cement, So-Lo (Solo Works) July... 82
Level Buoy (Taylor Instr. Co.) July..... 75
Lithcote-$FeCl_3$ Resistant Paint (Lithgow) Feb. 87
Long-Taper Pipe Reamer (Ridge Tool) Mar. 77
"LOOKS" Goggles (M.S.A.) July..... 74
"Magic Grip" Sheave (Allis-Chalmers) Jan. 74
Micromet (Calgon) Nov. 81
Meter Prover (Pemco) Jun. 120
Paving Breaker, Gas Hammer (Syntron Co.) July 75
Plastic Stock Bin Card Holder (Hollywood Athletic Co.) Feb. 86
Pneumatic Remote Control Valve (Grove Reg.) May 81
Pressure Tester, "Dynastat" (Vulco) Oct. 96
Propeller Type Meter (Builders-Providence) May 78
Punch-Lok Hose Clamp (B. F. Goodrich) Feb. 85
Pyromaster (Bristol) Feb. 87
Regulator for Water Tanks (Watts) Nov. 80
Rotameter (Cochrane) Jun. 124
Rotameter Flow Ratio Controller, Oct.... 94
Rota Sight Flow Rate Alarm (Fischer & Porter) Mar. 78
Rubber Gloves, Synthetic (Goodrich Co.) July 83
Rust Prevention Coating (Klee Co.) July 82
Searchlight, Portable, "Big Beam" (U-C Lite) Nov. 74
Sewer Check Valves, Side Swing (Josam) Sept. 89
Shatterproof Manometers (Dwyer) Mar. .. 79
"Sure-Shift" Interconnector (Industrial Interconnector) May 80
Tachometer Control Chem. Feeder (Chem.-Feeds) Nov. 76
Thermometer, Dial (Taylor Inst. Co.) July 74
Three Way Valve (R-S Products) Jun..... 126
"Torcontrol" Clutch (Research Co.) July. 82
Uni-flow Conveyor (Chain Belt) Apr. 73
Variable Speed Drive (Lombard) Nov..... 74
Venturi Distributing Wall (Stuart) Sept. 87
Vest Pocket Slide Rule (Tavella Sales) Mar. 77
Walking Beam Flocculator (Stuart) Sept.. 86
Water Pressure Regulator, Master (Birch) Sept. 91
Equipping the Sewage Plant Laboratory. R255
Equivalent Pipe and Loop Flow Distribution 313
Essential Objectives in Planning Post-War Betterments—An Editorial..... 38
Estimating Safe Yields From Small Streams 107
Examining 100 ml. Portions of Water... 321
Exclusion of Waste Oil From Sewers.... 226
Exhibitors at Milwaukee 230
Experience in Diffused Air Activated Sludge Plant Operation R211
Experience in Sewer Maintenance..... R187
Experiences With Up-flow Type Basins.. 12

F

Fed. of Sewage Wks. Assn..... 327
Fed. of Sewage Works Assn's. 16th Annual Meeting, Part II, 431; Part I.. 377
Ferric Chloride R241
Ferric Salts in Water and Sewage Treatment R235
Fertilizer, Sludge As..... R249
Fifth Annual Water Conf. Engrs. Soc., West. Penn. 309
Filters—
Cleaning with Chlorine 209
Cleaning with SO_2 ..... R157
Plant at Mobile 322
Washing R151
Financing Post-War Public Works..... 310
Financing Municipal Improvements..... 383
Financing Sewage Works Improvements. 81
Financing Sewage Works Operation..... R164
Finch Becomes Indianapolis Water Co. Chief Engineer 168
Fire Hydrant Flow Gage 412
Fish Screen, Burkey Electric (Elect. Fish Screen) ..... Dec. 82
Fittings and Pipes, Loss of Head in..... R27
Five Hundred % A.W.W.A. Member Increase Is Arkansas Record..... 162
Floc Formation and Colloidal Silica..... 211
Flow:
Diagram of Sewage Processes..... R180, 81
Flow Measurement 323
Friction, Measurement and Power.... R17
Gage for Sewers, Maximum R193
Hydrant 412
In House Service Pipes R96
In Pipes, Full and Partly Full 203
Loss of Head R27
Through Concrete Pipes R262, R263
Flow Splitting Device (Fischer & Porter) Dec. 89
Flushing of Small Mains with Compressed Air R110
Flushing Sewers R192
Formation of Floc with Colloidal Silica.. 211
Fortieth Anniversary of Gillette Publishing Co. 104
Friction Loss
Condition of Mains R101
In Pipe Lines, Valves and Fittings.. R27
Friction Measurement and Power, Flow.. R17
Friel Honored, Francis..... 291

G

Gadgets 70, 151, 400, 404
Galvanic Corrosion 230
Gage for Fire Hydrant Flow 412
Gage for Sewers, Maximum Flow..... R193
Gas Engines (Aurora, Ill.) Continue to Earn Money 426
Gary, Ind., Activated Sludge Plant..... 143
Gas Engines for 31,400 BHP..... 206
Gas Engine Performance at Marion, Ind. 336
Gas Engines, Principles of Power Generation with Sewage..... R227
Gauge for Meter Change Gears..... R114
Gear Gauge, Change, for Meter..... R114
Gehm Becomes Technical Advisor to National Council for Stream Improvement 326
Gidley, H. T., Died Suddenly..... 150
Greenville Meetings of the S.E. Section of A.W.W.A. 253
Greenville S.C. Water Supply..... 131
Grit Channel, Velocity Control..... R169

H

Hammer, Water R69
Handbook of Applied Hydraulics—A Review 36
Hansen, Paul, Passes..... 52
Hardness, Removal of Iron and..... R141
Hard Spot and Mud-Ball Breaker..... R143
Hardy Cross Method..... 313
Have You Any Sewers That Sew in Your Town? 312
Head Loss in Pipes and Fittings..... R27
Health and Copper..... R138
Heater, Enclosed Combustion (H. Nelson) Dec. 87
Heating Coil Corrosion, Corrosion of Digester 185
Here and There With Doc Symons.....
.....Jan. 67, Feb. 77, Mar. 73, Apr. 68, May 76, June 116, July 70, Aug. 81, Sept. 82, Oct. 82, Nov. 69, Dec. 74
History of the Maine Water District.... 317
Hope We Won't Come to This (Cartoon) 108
Horace Brown 32 Years at Ottumwa..... 126
Horsepower and Electrical Data..... R43
House Service Pipe Flow..... R96
How to Avoid Galvanic Corrosion..... 230
How to Bend Pipes..... R111
Hurst (Bill) Promoted to Asst. City Engineer of Winnipeg..... 240
Hydraulics Handbook—Review 36
Hypo-Chlorinator for Five Dollars, Temporary 404

I

Illinois Section Has Varied Program at Peoria 171
Importance of Sewage Plant Operating Records 303
Improvement Financing for Municipalities 383
Incineration of Sludge..... R233
Incubator, 20° 225
Index Test, Sludge 222
Index of Products, Classified R2
Indiana Section's 37th Meeting Well Attended 163
Indiana's Remarkable "Know How" Brochure on Water Works & Sewerage Benefits 382
Industrial Wastes
Rayon 205, 295
Special Sewer Service Charges.....113, R166
Utilization Conference 405
Ind. Waste Util. Conf., Purdue Univ..... 405
Instructive Wall Panel for Treatment Plants R248
Interconnections in Western N. Y., Water Supply 123
Inventory of Sewerage Needs in U.S.A.. 277
Iron and Hardness, Removal of..... R141
Is A.WW.A. Missing a Bet on Membership (Editorial) 232
Is Water Main Cleaning Good Economy.. 72

J

Joint Administration and Collection of Water and Sewer Accounts..... R161
Joint Caulking, Pneumatic..... R109
Jointing, Proper Sewer..... R194
Jonesboro, Arkansas, Sewage Treatment Plant 157
Jones, H. P., and Co. Becomes Jones and Henry 162
Just for the Sake of the Record..... 128

K

Keeping Filters Clean with Chlorine..... 209
Keep the Place Spruced Up!—Editorial 406
Kenosha's "Water Supply Protect Works" Records 393
Kinks 151
Kunsch, Walter, Succeeds Wisely..... 74

L

Laboratory Equipment for Sewage Plants R255
"Lace Curtain" Pumping Station, A..... 311
Ladder, Aluminum (Duo-Safety) ..... Dec. 86
Land Measures R55
Larson, C. C. (Swede), Pres. Illini Alumni 95
Leakage:
Correction R105
Detection R172
Legal Limits of a Water Supply System. 292
Long Island Section Holds Annual Meeting 19
Latin-American Cities Improving Water Systems 215
Lime Solution Controller..... 400
Limitation in the Bacteriological Examination of Water..... 109
Looks Good to Drink..... 309
Loop Flow Distribution and Equivalent Pipes 313
Loss of Head in Pipes and Fittings..... R27

M

Mabee, "Bill", Retires After 42 Years with Indianapolis Water Co. 168
Maine Utilities Assn. Holds 15th Annual Meeting 93
Maine Water District History..... 317
Maine Line Meters, Selection of..... R45
Mains, Determining the Condition of.... R101
Maintenance:
Centrifugal Pumps R59, R63
Pump 169
Sewers R187
Small Pumping Stations R199
System, Planned 117
Tanks, Elevated Storage R91
Water Well Capacity R112
Maintenance of Pumps..... 169
Maintenance of Water Wells..... 60

Management of Water Works and Sewerage, Combined 153
Manganese Removal R147
Manhole and Inlet Traps for Sewer Odors R195
Manning's Formula Solution 330
Manpower Problems of Water Utilities... 152
Manual for Water Works Operators (Book Review) 108
Manufacturers Elect, The..... 250
Man Without a Name..... 11
Maryland Post-War Public Works Manual 430
Materials for Pipe, Alternate and Substitute 216
Materials, Weights of..... R82
Maximum Flow Gage for Sewers..... R193
Measurement and Power, Flow, Friction. R17
Measurement of Sewage Flow in Open Channels 323
Measures of Land..... R55
Mechanism of Corrosion of Water Pipes, The R133
Media for Air Diffusion, Economics of Cleaning R222
Meetings of N.Y.S.S.W.A. and A.S.C.E. Sanitary Division 63
Metering, Practical Methods of Procedure R115
Meter:
Chamber, Victory Model 25
Change Gear Gauge R114
Main Line, Selection R45
Metering, Practical Methods R115
Shop for R118
Meter Readers Nightmare..... 150
Meter Shop, A Small..... 118
Metric Conversion Table..... R26
Michigan Sewage Works Ass'ns 20th Meeting 180
Micro-Organisms and Aquatic Vegetation, Control of R127
Milwaukee Conference Looks Like a "Sell-Out" 152
Milwaukee Sewage Plant Control..... 99
Missouri Conference Impressive..... 57
Missouri Valley Section Cancels Meeting. 368
Mobile Has New Filtration Plant... 322
Modern Sewerage Systems, Benefits from 303
Morrill Reports on Addis Ababa..... 366
Morris (Sam) Made Gen'l. Mgr. and Chief Engr., Dept. of Water and Power, Los Angeles 339
Mud-Ball and Hard Spot Breaker..... R143
Muddy Waters! An Editorial..... 190
Mud-Hog, The 259
Municipal Depreciation Accounting Practices 270
Municipalities Can Finance Improvements If They Make the Effort..... 383

N

New Central Control at Milwaukee Sewage Treatment Plant..... 99
New England S.W.A. Fall Meeting Held in Worcester 353
New London's New Pumping Station..... 208
New Jersey Section's Winter Meeting... 105
News! Water Rate Reduction..... 280
N.E.W.W.A. 63rd Annual Meeting Continued, Part II..... 388
New York Section Elects..... 179
N. J. Sect. A.W.W.A. Meeting in Atlantic City 23
N. J. Sewage Works Assoc. Holds Twenty-Ninth Annual Meeting..... 135
New P-141 Sewerage Order..... 34
New Pumping Station Control Room in Schenectady by G. E. 89
Newsom, Reeves, Becomes Village Mgr.. 102
N.E.W.W.A.'s March Meeting 129
N. Hampshire Water Works Assn. Meets at Nashua 398
Nomograph for Solving Manning's Formula 330
Now It Can Be Told..... 376
Nomographs (See Charts)
Nomographic Charts Used for Pipe Flow. 203
Norcom Heads N. J. Section 426
North Dakota Water and Sewage Works Conference 362
Northeastern Changes to Shorter, More Inclusive Name 188
N.Y.S.S.W.A.:
Long Island Section 19
Annual N. Y. Meeting in Jan..... 63
Annual Spring Meeting 301

O

Objectives in the Programming of Post-War Sanitation Works 29
Odor Traps for Sewer Manholes and Inlets R195
Ohio Section's Sixth Annual Conference. 261
Oil from Sewers, Exclusion of Waste.... 226
Oil Problems in Sewage Solved..... 53
Open Channel Sewage Flow Measurements 323, 436
Operation and Maintenance of Small Pumping Stations R190
Operation of Activated Sludge Plants... R211
Operation of Sewage Plant a Corporate Function 206
Organization of Professional and Public Service Employees 233
Orifice at End of Pipe, Flow Measurement with R103
Owen, Mark, Heads A.S.C.E. Research and Development Division..... 184
Oxidants and Reductions in Sewage Plant Effluents and Streams..... 219

P

P-141 Sewage Order.....34, 215, 237
Packing Pointers 204
Paint Requirements, Water Tanks..... 207
Painting Damp Water Pipes..... R154
Panel, Wall, for Treatment Plants..... R248
Parshall Flume 323
Patents, Water and Sewage 28, 55, 106, 210, 332, 369
Penna. Water Operation Hold Unique Meeting 401
Penn Salt's Research Laboratory Dedicated 403
Philadelphia Sets Up Sewer Rental Plan. 206
Pict-on? Well, He Was and Is..... 327
Pipe:
Bending R96
Concrete, Flow in R262-R263
Corrosion Mechanism R133
Cutting by Compressed Air R111
Cutting Cast Iron R75
Equations R261
Flow in House Service R96
Flows 203, R262-R263
Joint Caulking R109
Line Surge of Pump Discharge R66
Loss of Head in R27
Materials, Alternate and Substitute.. 216
Orifice R103
Painting, Damp R154
Planned Maintenance System 117
Plan for Sewage Works Operation Financing, Revenue R164
Plates, Air Diffuser, Purging with Chlorine R221
Plea for Fair Play, A..... 150
Pneumatic Caulking of Pipe Joints..... R109
Post War Planning.....29, 251, 261, 310, 383
Post-War Planning, Selling to Local Taxpayer 261
Power Crane Truck..... R36
Power, Flow, Friction, Measurement, and R17
Power Generation with Sewage Gas Engines R227
Practical Electricity in the Plant..... R37
Practices, Sewer Design 227
Processes and Results, Sewage Treatment R175
Products, Classified Index of..... 2
Proportioning Concrete R160
Programming Post-War Works..... 29
Public Utility Goes to School, The..... 240
Public Works, Financing Post-War..... 310
Public Works Manual, Post-War Maryland 430
Pumping Station, A "Lace Curtain"..... 311
Pumping Station, Electric Heat Solves Problems at R120
Pumping Station Operation and Maintenance R199
Pumps:
Centrifugal R59
Conservation R63
Discharge Surge Line R66
Efficiencies R59
Maintenance 160, R63
Packing Pointers R204
Terminology R62
Purging Air Diffuser Plates with Chlorine R221

R

Ratchet Set, Midget (Tapax) ..... Dec. 84
Ratio of Sludge Density to Volume..... R252
Rayon Wastes 265, 295
Reconstruction of Water Treatment Works at Williamson, N. Y. 357
Records for Sewage Plant Operation, Importance of 393
Reductants and Oxidants in Sewage Effluents and Streams..... 219
Rebuilding Section of Trunk Sewer While in Service 328
Removal of Iron and Hardness..... R141
Removal of Manganese..... R147
Removal of Sludge, Reducing Cost of.... R247
Repainting Steel Water Tanks..... R95
Requirements for Paints on Water Tanks 207
Results of Effluent Chlorination at Cleveland 300
Revenue Plan for Sewage Works Financing R164
Rock Well Development..... 319
Roots in Sewers, Killing..... R246
Rupp, Dan, Killed by Troop Train..... 382

S

Safe Yields From Small Streams, Estimating 107
Salaries, Raising, Reduces Costs of Operation 430
Sanitary Engineering Division, USPHS 436
Sand in Well Water, Determination of... R149
Sanitary Corps Seeks Additional Sanitary Engineers 277
Saville Honored, Thorndike..... 237
Schroepfer, George, Consultant to Office of Chief of Engineers, War Dept..... 356
Scum Removal Brush for Settling Tanks. 224
Seabee Wins His Spurs, A Water Works 195
Selecting Deep Well Centrifugal Pumps (Part I) 348
(Part II) 371
Selling Postwar Planning to the Local Taxpayer and Governing Body..... 251
Service Pipes, Flow in House..... R96
Service Standards, Water..... 141
Settleable Solids in Sewage, Determination 37
Sewage:
Chlorine Dosage Control R244
Collection of Joint Accts..... R161
Developments 39
Flow 323
Gas Engines R227, 336
Kinks and Gadgets 151
Laboratory Equipment R255
Operators Slide Rule R184
Oxidants and Reductants 219
Pumping Problem 367
Settleable Solids 37
Sludge (see Sludge)
Works Operation Financing R164
Sewage Effluent Chlorination..... 300
Sewage Plant Operating Records, Importance of 393
Sewage Treatment Processes and Results R175
Sewage Plant Kink and a Gadget..... 151
Sewage Treatment:
Cleaning Diffuser Media R222
Effluent Chlorination 300
Ferric Chloride Coagulation R235
Oil Problems 53
Plant Laboratory R255
Plant Operation Financing R164
Processes and Results R175
Wall Panel Chart R248
Sewage Treatment Plant at Jonesboro, Ark. 157
Sewage Works Federation Program Shaping Up 327
Sewer:
Collection of Joint Accts..... R161
Design Practices 227
Exclusion of Waste Oil from 226
Flow Detection of Waste Water ... R172
Flow Gage, Maximum R193
Flushing 192
Jointing 194
Maintenance R187
Odor Traps R195
Rebuilding 328
Rental Charges 333
Service Charges for Industrial Waste R166
Size and Slope R204
Sewerage and Industrial Waste Developments 39
Sewerage Needs in U. S. A. Inventoried 277
Sewerage Order P-141 Undergoing Revision to Issue Soon..... 215
Sewerage Systems, Benefits From..... 303
Sewer Design Practices..... 227
Sewer Rental Charges Adopted at Cleveland 333
Sewer Rental Plan for Philadelphia..... 206
Sewers 186
Sewer Scooter (Fitzgerald) ..... Dec. 85
Short School History Made (An Editorial) 116
Silica and Floc Formation, Colloidal..... 211
Simplified Transportation R36
Sixty-Third Annual Meeting of N.E.W.W.A., Part II, 388; Part I.. 341
Size and Slope of Sewers..... R168
Skinker, Tom, Elevated to St. Louis Utilities Director 84
Slope and Size of Sewers..... R168
Slide Rule for Sewage Operators..... R184
Sludge:
Cost of Removal R247
Density to Volume Ratio R252
Digester Heating Coil Corrosion 185
Fertilizer 77, R249
Gas Engines R206
Incineration R253
Index Test 222
Level Sounding Chain 189
Sludge Gas Engines for 31,400 B.H.P..... 206
Sludge Index Test in Activated Sludge Operation 222
Sludge Level Sounding Chain..... 189

Solution Feed Control 221
Solving a Sewage Pumping Problem..... 367
Solving Problems Caused by Oils in Sewage at Springfield, Mass. 53
Sounding Chain for Sludge Level..... 189
Southwest Section Meeting in Austin Sets New Record 413
Special Sewer Service Charges for Industrial Wastes 113, R166
Special Valve for Solution Feed Control.. 221
Spring Cleaning Time (An Editorial).... 190
Sprinkler Head Discharge..... R96
Squares and Square Roots, Table of..... R264
Standards for Water Service..... 191
Station Operation and Maintenance, Small Pumping R199
Stepleton Joins Browne and Associates.. 405
Storage, Elevated R91
Straws in the wind of Blueprint Now 411
Streams and Effluents, Oxidants and Reductants in 219
Stanley, Maj., Now Teaching at M.I.T. 185
Substitute Pipe Materials 216
Sulphur Dioxide for Filter Cleaning..... R157
Surge Troubles on Pump Discharge Lines, Eliminating R66
Surveys and Leakage Correction, Water Waste R105
Symons, Martin—A Tribute (May)..... 76
System, Distribution R79

T

Tale of Two Cities (Cartoon)..... 102
Tanks—
Elevated Storage R91
Paint Requirements 207
Repainting and Repairing R95
Tate Pipe Linings 238
Temporary Hypo-Chlorinator for Five Dollars 404
Terminology in Pumping R62
Traps for Odors from Sewer Manholes and Inlets R195
Transportation Simplified R36
The Challenge of That Blank Sheet of Paper (An Editorial)..... 38
The Clicking Canadian Section (Editorial) 232
Thompson and Lang, Congratulations to. 19
Three Years' Operation of the Gary, Indiana Activated Sludge Plant..... 143
Time Saving Calculator 22, R43
Treatment Processes and Results, Sewage R175
Truck, Power Crane R36
Trunk Sewer Repair While in Service... 328
Twelve Million Dollars Voted by Portland, Ore., for Sewerage Project..... 208
Twenty-Sixth Texas Water Works and Sewerage Short School 103

U

Unbilled Revenue, Accounted for, Water and 278
Up-Flow Type Basins 12
Use of Nomographic Charts for Flow in Pipes, Full and Partly Full..... 203
USPHS, Sanitary Engineering Division. 436
U. S. Public Health Service Reorganizes. 19
Utility Restrictions Eased by W.P.B..... 51

V

Velocity Control in Grit Channels..... R169
Veis, Prof. to Direct Stream Studies for Pulp and Paper Industry 422
Veterans 75
Veteran Sewage Works Manager Retires. 48
"Victory Model" Meter Chamber..... 25
Viscose Rayon Manufacturing Wastes and Their Treatment—
Part I 265
Part II 295
Volume to Density Ratio in Sludge..... R252

W

Wall Panel for Treatment Plants..... R248
Wartime Reconstruction of Water Treatment Works at Williamson, N. Y. ... 357
Washing Filters R151
Washington Suburban San. Comm. Wins Award 411
Washington Uses Iron Pipe Screens..... 356
Waste Oil from Sewers, Exclusion of.... 226
Waste Surveys and Leakage Correction, Water R105
Waste Water Detection in Sewer Flows.. R172
Water
And Sewer Joint Accts..... R161
Coagulation with Ferric Salts R235
Examining 100 ml. Portions 321
Hammer R60, R69
Head Loss R27
Main Cleaning 72
Main Condition R101
Meters (see Meter)
Pipe Corrosion R133
Service Standards 191
Superintendent's Interest in Sewage.. 178
Supply Developments 1
Tank Painting Requirements 207
Waste Detection R172
Waste Leakage R105
Well Maintenance 69
Works Management Combined with Sewage 153
Water and Sewage Div. of A.C.S. Holds Interesting Sessions 365
Water and Sewage Patents.....
.....28, 55, 106, 210, 332, 369
Water and Sewage Treatment, Ferric Salts in R235
Water (A Poem) 215
Water and Sewage Chemist Made President of Illini Alumni..... 95
Water and Sewerage Developments in 1943 68
Water Company Gives Bonus..... 11
Water Conservation Par-Excellent..... 188
Water Flow Through Pipes..... 20, 78
Water Rate Reduction 280
Water Service Standards 141
Water Superintendent's Interest in Sewage Treatment 178
Water "Super" Has a Church..... 14
Water Supply Interconnections in Western New York 123
Water Supply of Greenville, S. C. 131
Water Supply System, Legal Limits of... 292
Water Supply vs. War Demands in Norfolk, Va. 407
Water Treatment:
Aquatic Vegetation Control R127
Cleaning Filters with Chlorine 209
Cleaning Filters with Sulphur Dioxide R157
Ferric Salts in R235
Filter Washing R151
Iron and Hardness Removal R141
Manganese Removal R147
Works Reconstruction 357
With Chlorine Dioxide 423
Water Well Capacity, Maintenance of.... R112
Water Works and Sewerage Under One Management 153
Water Works Depreciation and Accounting Practices (An Editorial)..... 302
Water Works Engineering in Disaster (Book Review) 188
Water Works Seabee Wins His Spurs.... 195
Weather Cycles 98
Weather Cycles Caused by Planet X..... 370
Weights of Materials R82
Well
Maintenance of Capacity.....67, R116
Sand in R149
Rock Development 319
Well Capacity, Maintenance of Water... R112
Well Water Sand, Determination of..... R149
West Virginia Conference, The..... 85
What's a Chemist? 14
What's Your Chlorine Demand?..... 90
What You Should Know About Your Steel Water Tanks 207
What to Tell the Complaining Consumer. 96
Whitman, Requardt and Smith, Engrs. Dissolve 95
Williams, Clyde E., Moves Offices to New Location 368
Wilmington's New Filter Plant Dedicated 27
Wisconsin Section's Meeting 15
World Traveler Learns Value of Sludge Fertilizer 77
W.P.B.
P-141 Sewage Order 34
Eases Restrictions on Water Utilities 51, 340
Order P-141 Undergoing Revision.... 215
Order P-141 Revised 237

Y

Yardage on Reels or Drums, Determining R261

AUTHOR INDEX—1944

Albert, Paul McH. 330
Amiss, Thos. L. 75
A.W.W.A. Committee R95

Backmeyer, David 335
Bailey, Wm. T. 96
Ball, Norman C. & Fitzgerald, R. W.... 407
Beckwith, H. E. R59
Bennett, Richard R69
Bloodgood, Don E. 222
Bonyum, Richard E. 178
Boyce, Earnest 29
Brossman, Chas. R91
Brown, James R. 72
Brown, R. F. R110
Bunker, George C. R149
Bushee, Ralph J. R169
Burr, Francis K. R235

Calderwood, Don C. R114
Capen, Chas. H. .....
Carr, J. Arthur 319
Cash, Bartley J. 76, 151, 225
Clark, H. W. 313
Coberly, Carroll H. 186
Cody, B. L. R63
Crane, Frederick W..... 113

Edwards, A. M. 56, R111
Emigh, Wm. C. 107
Eisner, Benjamin R204
Eliassen, Rolf 219
Enslow ..38, 80, 116, 190, R15, 232, 302, 406, 438
Esty, Roger 195, R118

Faber, Harry A. 281, 359
Fabrin, Axel O. 348, 371
Fischer, A. J., and Symons, George E.. 57
Fitzgerald, R. W. 407
Franklin, W. M. R221
Fuller, Harry U. 259

Gifft, H. M. 203, 427
Gillette, Halpert P. 98, 370
Glace, I. M. R161
Glover, W. W. 367
Goetz, John A. R164
Goff, Wm. A. R194
Gross, D. D. R172
Gunderson, N. E. 69, R112

Harding, James C. 200
Hartung, H. O. 12, 117
Hawkins, John L. 131
Hay, Harold R. 211
Hedgepeth, L. L., and Potter, J. M. R241
Hirsch, A. A. 189, 216, R184, 412
Horn, W. Walter R100
Howson, Louis R. R79, 274
Howson, L. R., and Mathews, W. W. ... 143

Keefer, C. E. 226
Killam, E. T. R23
King, Henry R. R205
Kozma, Albert B. 25
Kleth, Donald R. 20, 78
Krebbiel, A. 123
Krum, H. J., and Glace, I. M. R151

La Due, W. R. 81
Lauster, Kenneth C. 362
Levine, Max 109
Lischer, Vance C., and Hartung, H. O... 117
Livermore, Frank D. 251
Loving, M. W. 303
Lucoff, Julius R143

MacMahon, J. D. 423
McAmis, J. W. R246
McDonald, John D. 53
Malcolm, W. L. 227
Maiers, Joseph A. 99
Mathews, W. W. 274
Mavis, F. T. R202
Miller, Basil 184, 224
Morrill, Arthur 306
Morris, Samuel B. 1
Moore, Charles E. 278
Murdock, John H., Jr. 292

Nussbaumer, N. L., and Krebbiel, A. ... 123

Olewiler, G. M. R199

Palen, V. W. 22, R43
Patrick, J. G. R157
Perry, Earl R. 311
Perryman, John M. 207
Phillips, R. S. R147
Poston, H. W. 209, 321
Potter, J. M. R241
Pray, John W. 153

Radcliffe, D. M. R66
Rapp, W. M. R75
Raisch, William 310
Rawn, A. M. 39, 233
Rebsamen, Lloyd M. 157
Reynolds, Ralph W. 238
Richardson, Chas. G., and Maiers, Jos. A. 99
Riddick, Thomas M. R133
Roetman, E. T. 265, 295
Rowntree, Benard 231
Rudgal, H. T. 393
Ruehl, E. H. R115

Saunders, Daniel J. R141
Schaphorst, W. F. 221, R184, R250
Schumpert, H. W. R143
Snell, J. R. 404
Sperry, W. A. R247
Smith, Chester A., and Rebsamen, L. M. 157
Smith, Marsden C. 91, 191, R37
Squire, A. Bradford 357
Stock, Harry 169
Symons, George E. .....23, 31, 36, 37, Jan. 67, 63, Feb. 77, 113, Mar. 73, Apr. 68, 163, 171, 180, 188, 190, May 76, 232, June 116, R175, R244, 242, 248, 261, July 70, 285, 301, Aug. 81, Sept. 82, Oct. 82, 406, Nov. 69, Dec. 74
Symons, George E., and Crane, Frederick W. 113, R166
Symons, Martin M. 127, 170, 221
Synan, J. F., MacMahon, J. D., Vincent, G. P. 423

Tarrant, J. 323
Taylor, D. R. R36, R101
Tempest, W. F. 393
Thompson, L. N. R161
Thoresen, T. C. R45

Van Horn, W. R127
Van Kleeck, Le Roy W. R249
Veatch, N. T. 270
Vincent, G. P. 423

Warrick, L. F., Wirth, H. E., Van Horn, W. R127
Watson, Geo. H. 322
Watson, John D. R192
West, Maj. Leslie E. 328
Wiest, Gordon J. R252
Whitman, N. D. R263
Wilson, E. K. R105
Wirth, H. E. R127
Wirts, John J. R222, 300
Wisely, W. H. R187, R211
Wittwer, Norman C. R227, R255
Yaxley, R. G. 90

281, 369
348, 371
37
407
R221
220
03, 427
98, 370
R151
367
R164
R194
R172
9, R113
290
12, 117
131
211
R241
84, 412
R109
79, 274
143
226
R23
R205
25
20, 78
123
R151
81
362
109
117
251
306
R143
423
R246
53
227
99
274
R262
84, 224
366
1
278
290
123
R199
2, R43
R137
311
297
R147
09, 321
R241
153
R06
R75
310
39, 233
157
238
90
R133
65, 295
231
393
R115
R141
, R250
R143
404
R247
157
1, R37
357
169
ec. 74
, R166
70, 221
423
323
, R101
383
R161
R45
R127
R249
270
423
R127
322
R192
328
R252
R263
R105
R127
22, 300
, R211
, R235
90